No. 96-188

IN THE
Supreme Court of the United States
OCTOBER TERM, 1996

GENERAL ELECTRIC COMPANY, *et al.*,
Petitioners,
v.
ROBERT K. JOINER, *et al.*,
Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Eleventh Circuit

REPLY BRIEF FOR PETITIONERS

DAVID H. FLINT
ALEXANDER J. SIMMONS, JR.
SCHREEDER, WHEELER & FLINT
1600 Candler Building
Atlanta, Georgia 30303
(404) 681-3450

HENRY W. EWALT
Associate General Counsel
Westinghouse Electric Corporation
11 Stanwix Street
Pittsburgh, Pa. 15222
(412) 642-4025

Attorneys for Petitioner Westinghouse Electric Corporation

EDWARD M. NEWSOM
HAWKINS & PARNELL
303 Peachtree Street, N.E.
Atlanta, Georgia 30308
(404) 614-7400

JOHN G. KESTER *
STEVEN R. KUNEY
ROBERT J. SHAUGHNESSY
JOANNA L. GROSSMAN
WILLIAMS & CONNOLLY
725 12th Street, N.W.
Washington, D.C. 20005
(202) 434-5069

ANTHONY L. COCHRAN
CHILIVIS, COCHRAN, LARKINS & BEVER
3127 Maple Drive, N.E.
Atlanta, Georgia 30305
(404) 233-4171

BENJAMIN W. HEINEMAN, JR.
Senior Vice President, General Counsel and Secretary
THOMAS H. HILL
Senior Counsel
EFFA G. FARNSWORTH
General Electric Company
3135 Easton Turnpike
Fairfield, Connecticut 06431

Attorneys for Petitioner General Electric Company

* Counsel of Record

[Additional Counsel Listed on Inside Cover]

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GERARD H. DAVIDSON, JR.
SMITH HELMS MULLISS
& MOORE, L.L.P.
300 North Greene Street
Greensboro, N.C. 27401
(910) 378-5200

THOMAS M. BISTLINE
Assistant General Counsel
Monsanto Company
800 North Lindbergh Blvd.
St. Louis, Missouri 63167
(314) 694-2989

Attorneys for Petitioner
Monsanto Company

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REPLY BRIEF FOR PETITIONERS

Respondent's brief shows a major reluctance to face the issue on which this Court granted certiorari: the standard of appellate review. Nearly all of petitioners' opening brief remains unanswered or conceded. Respondent scarcely attempts to defend the "particularly stringent" standard of review the Court of Appeals adopted. P.C.A. 4a.[1] In fact, respondent appears to acknowledge that the correct standard, as nearly all federal circuits and state courts have held, is one of "abuse of discretion" or "manifest error." See Resp. Br. 26.

I.

It takes many pages before respondent acknowledges the issue before this Court: what was the correct standard of appellate review to apply to the District Court's decision? Respondent's entire effort to defend the Court of Appeals' one-way "particularly stringent" standard of appellate review—applicable only when expert opinion is

[1] "P.C.A." refers to the appendix to the petition for certiorari, and "S.A." to the appendix to respondent's brief; other references are as noted at Pet. Br. 1 n.1.

excluded under Rule 702 and summary judgment results —is confined to one long footnote. Resp. Br. 30 n.48. "There are two possible grounds," respondent says, "for devoting greater appellate resources to reviewing the exclusion of critical evidence than its admission." *Id.* First, he argues, Federal Rule of Evidence 702 creates an "explicit statutory presumption in favor of admitting relevant evidence" that "[p]resumably . . . justifies devoting at least *some* additional appellate resources." *Id.* (emphasis in original). Second, he says, exclusion "can impair the full realization of a significant constitutional value —the Seventh Amendment guarantee of a jury trial." *Id.*

For his footnoted Rule 702 argument, respondent cites only a general reference to the "liberal thrust" of the Federal Rules of Evidence and their "relaxing the traditional barriers to 'opinion' testimony" in *Beech Aircraft Corp.* v. *Rainey*, 488 U.S. 153, 169 (1988), and the Court of Appeals' belief that liberalization of evidentiary procedure means a "preference for admissibility." Resp. Br. 30 n.48, quoting P.C.A. 4a. But as *Daubert* made clear, "relaxing the traditional barriers"—such as the traditional requirement that experts testify in the form of responses to hypothetical questions, or the traditional ban on expert testimony as to the ultimate issue—does not mean allowing opinions that are found to lack scientific support. Quite the contrary. See *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-90 (1993). The policy of Rule 702 is already incorporated in the *Daubert* standard that district courts apply. The Rule provides no additional basis at the appellate level to reverse district courts that exclude unsupported opinions under *Daubert*. Respondent confuses the selection of the proper standard of appellate review with the subsequent and distinct issue whether, after applying a proper standard of review, any error identified requires reversal. See Fed. R. Evid. 103(a).

For his footnoted Seventh Amendment argument, respondent cites an opinion saying that "a more searching inquiry" should be given to grants of new trial that overturn jury verdicts for insufficient evidence. *Langevine* v. *District of Columbia*, 106 F.3d 1018, 1023 (D.C. Cir. 1997). But certainly *Daubert* settled that the trial court's traditional role of determining admissibility, which Federal Rules of Evidence 104(a) and 702 reflect and reinforce, does not implicate the Seventh Amendment. See 509 U.S. at 597; *cf.* also, *e.g.*, *Markman* v. *Westview Instruments, Inc.*, 116 S. Ct. 1384, 1393-95 (1996); *Galloway* v. *United States*, 319 U.S. 372, 390 (1943) (in 1791 "as now courts excluded evidence for irrelevancy and relevant proof for other reasons").

II.

Instead of even attempting to confront the mountain of authority against a one-way "particularly stringent" standard of review, see Pet. Br. 19-45, respondent searches (as he did in opposing certiorari) for some way to escape the issue in this case. He first tries to dismiss the Court of Appeals' "particularly stringent" standard as nothing more than a comment on "efficient allocation of judicial resources." Resp. Br. 28 n.45. Alternatively, respondent says that review by this Court is not called for because, as he reads it, the Court of Appeals' review standard really was *de novo*, and its explicit adoption of the "particularly stringent review" standard was all a dictum it never applied. Resp. Br. 19, 31, 34. Neither attempt at evasion works.

1. Respondent says that the Court of Appeals' adoption of the "particularly stringent review" standard amounted "simply" to an observation about selecting the issues to which "appellate courts will devote more time and attention." Resp. Br. 27. All that is meant by "par-

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[2] For this anodyne explanation respondent quotes repeatedly the *Paoli* opinion's phrase "hard look." But that was not the term used by the Court of Appeals here, which held that "we apply a *particularly stringent* standard of review." P.C.A. 4a (emphasis supplied), citing *Paoli*. And *Paoli* itself explained that what it meant by "hard look" was "more stringent review." 35 F.3d 717, 749-50.

ticularly stringent" review, he says, is "reserving extra judicial time and attention for important admissibility decisions, and less time for trivial ones." Resp. Br. 29.[3] He does not explain how a ruling on the same admissibility objection can at once be "trivial" if a district court decides to admit, but "important" if the court decides to exclude.

No one else has ever thought the issue was merely one of "judicial resources."[3] The *Paoli* court, which invented the "particularly stringent" standard, explained that its standard of appellate review was designed to make exclusions under Rule 702 more likely to be reversed on appeal than if the opinions had been admitted:

> *"the likelihood of finding an abuse of discretion is affected* by the importance of the district court's decision to the outcome of the case."

In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717, 750 (3d Cir. 1994) (emphasis supplied), *cert. denied sub nom. General Elec. Co.* v. *Ingram*, 115 S. Ct. 1253 (1995).[4] And other courts of appeals have recognized *Paoli* and the present case as creating a significant split of authority. See *Duffee* v. *Murray Ohio Mfg. Co.*, 91 F.3d 1410, 1411 (10th Cir. 1996) (rejecting "particularly stringent" standard). They have noted their anticipation that this Court will resolve this "disagreement among the circuits" in this case. *Cortes-Irizarry* v. *Corporacion Insular de Seguros*, 111 F.3d 184, 189 n.4 (1st Cir. 1997).

2. Respondent seeks to elude this Court's review by arguing that actually the Court of Appeals did not really

[3] Justice Holmes' "concession to the shortness of life" that respondent cites had nothing to do with appellate review, but rather explained why collateral evidence is not admitted in trials. See Resp. Br. 28 n.45, quoting *Reeve* v. *Dennett*, 145 Mass. 23, 28, 11 N.E. 938, 944 (1887).

[4] In *Paoli* itself the court of appeals, using its newly-minted "more stringent" standard, reversed a District Court's exclusion of opinions of several scientists even though the district court had held a five-day evidentiary inquiry into their methodology or lack thereof. See 35 F.3d at 766, 767, 771, 772.

apply the *Paoli* "particularly stringent" standard it explicitly adopted. Instead, he argues that the Court of Appeals applied an even less deferential standard—*de novo* or plenary review—and that "the district court's rulings all were reversed for errors of law." Resp. Br. 19; see also *id.* at 20, 31.

(a) Respondent forgets that even if his characterization of the Court of Appeals' standard as *de novo* or plenary review were accurate, that still would not alter the question before this Court, which is:

> "What is the standard of appellate review for trial court decisions excluding expert testimony under *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993)?"

Pet. Cert. i. That question "fairly include[s]," Sup. Ct. Rule 14.1(a)—indeed, expressly includes—determining the correctness of *whatever* standards of appellate review the Court of Appeals applied. See, *e.g.*, *Yee* v. *City of Escondido*, 503 U.S. 519, 535 (1992).

(b) The Court of Appeals nowhere disagreed with the District Court's explication of Rule 702 and *Daubert*. The District Court explained that under Rule 702 "the basic methodology employed to reach . . . a conclusion [must be] sound." P.C.A. 67a, quoting *Wells* v. *Ortho Pharmaceutical Corp.*, 788 F.2d 741, 745 (11th Cir.), *cert. denied*, 479 U.S. 950 (1986). The Court of Appeals agreed that the trial judge must "make a 'preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid.'" P.C.A. 6a, quoting *Daubert*, 509 U.S. at 592-93. The Court of Appeals' disagreement was with the District Court's performance of the "gatekeeping" function; it held the District Court had "improperly assessed" the particular opinions' admissibility. P.C.A. 2a.

Respondent stresses one comment in the District Court's lengthy opinion, that petitioners were successfully "attacking the conclusions that Plaintiffs' experts *draw from the studies they cite*." P.C.A. 58a (emphasis supplied). The District Court was simply pointing out the fundamental

methodological flaw that petitioners were highlighting: that the opinions could not by scientific reasoning and logic be "draw[n] from the studies they cite." The Court of Appeals similarly faulted the District Court for referring to lack of support for particular conclusions rather than "viewing the bases of an expert's opinion as a whole." P.C.A. 13a. But if a district court, in determining whether an opinion rests on scientific methodology, oversteps its "gatekeeping" function,[6] that would be an abuse of discretion, not an error of law.

Respondent observes that "District courts do not have 'discretion' to misinterpret the Federal Rules of Evidence." Resp. Br. 20. Indeed they do not. And neither do courts of appeals, by obliterating the discretion assigned to trial judges by Rules 104(a) and 702. Under respondent's proposed deconstruction of the Court of Appeals' ruling, virtually any case in which a district court excluded expert testimony under Rule 702 for failure to provide scientific support for the opinions could be recharacterized as a misconstruction of Rule 702. Asserted error in a discretionary ruling would be transmuted into error of law, to be revised completely on appeal *de novo*. Appellate judges, rather than trial judges, would become the first-line Rule 702 "gatekeepers."

(c) Respondent by calling this *de novo* or plenary review really is condemning what occurred. The "particularly stringent review" the Court of Appeals exercised indeed was so devoid of any deference to the trial judge that it did amount virtually to reexamining the record *de novo*—not based on the District Court's use of an incorrect legal standard, but rather because the Court of Appeals took over the "gatekeeping" role. Obviously

[6] That did not occur here. The District Court plainly was referring to an absence of methodology, that the premises offered no support for the conclusions. It was not saying, for example, that it simply disagreed with or would not accept a conclusion that PCBs could cause human small-cell lung cancer, or that without regard to methodology it preferred the opinions of one set of experts over those of another.

such a standard applied to the District Court's "gatekeeping" judgment would be even more difficult to justify under Rules 104(a) and 702 than the "particularly stringent" review the Court of Appeals described.

III.

Respondent opens his brief with a lengthy excoriation of PCBs. He says that "PCBs have long been regarded as extremely hazardous to humans." Resp. Br. 1. He quotes an opinion of this Court summarizing a bankruptcy record that referred to PCBs as "highly toxic carcinogen[s]." *Id.*, quoting *Midlantic Nat'l Bank* v. *New Jersey Dep't of Environmental Protection*, 474 U.S. 494, 497 (1986). He cites a law enacted in the 1970s that prohibited production of PCBs. Resp. Br. 1 n.2, citing Toxic Substances Control Act, § 6, 90 Stat. 2003, 2020 (1976), as amended, 15 U.S.C. § 2605. He also cites occasional characterizations of PCBs by the Environmental Protection Agency and other administrative agencies that assume the human carcinogenicity of PCBs. Respondent misconceives the relevance of such materials. Neither dicta in court opinions nor statements from administrative agencies constitute scientific evidence admissible in court, or add a particle to what science does or does not know.

1. Respondent makes much of EPA's inclusion of PCBs in its category of "probable human carcinogens." Resp. Br. 1-2. But regulatory bodies, quite properly, characterize substances and evaluate their risks for very different purposes than determining scientific proof of legal causation. See generally S. BREYER, BREAKING THE VICIOUS CIRCLE 47-50 (1993). As a policymaking body, EPA is free to base its actions on evidence and reasoning too unreliable to be "[s]cientific knowledge" admissible in court. "[S]peculation, conflicts in evidence, and theoretical extrapolation typify [regulators'] every action." *Ethyl Corp.* v. *EPA*, 541 F.2d 1, 24 (D.C. Cir.) (*en banc*), *cert. denied*, 426 U.S. 941 (1976). But speculation by a scientist in court is inadmissible under Rule 702. See, *e.g.*, *Diviero* v. *Uniroyal Goodrich Tire Co.*, 114 F.3d

851, 853 (9th Cir. 1997). The policy criteria EPA uses to evaluate carcinogenicity for regulatory purposes[6] are not the scientifically reliable methodology required to form an opinion about the cause of human disease under the Federal Rules of Evidence in a tort case. Nor do they purport to be. As the Fifth Circuit has explained:

> "Regulatory and advisory bodies such as IARC, OSHA and EPA utilize a 'weight of the evidence' method to assess the carcinogenicity of various substances in human beings and suggest or make prophylactic rules governing human exposure. This methodology results from the preventive perspective that the agencies adopt in order to reduce public exposure to harmful substances. The agencies' threshold of proof is reasonably lower than that appropriate in tort law, which traditionally makes more particularized inquiries into cause and effect and requires a plaintiff to prove that it is more likely than not that another individual has caused him or her harm."

Allen v. *Pennsylvania Engineering Corp.*, 102 F.3d 194, 198 (5th Cir. 1996) (quotation marks omitted).

Nor does respondent explain what EPA's term of art "probable human carcinogen" really means. In labeling a substance a "probable human carcinogen," EPA declares a statement of policy, not a finding of scientific fact. For convenience, EPA calls a "probable human carcinogen" any substance for which there is "sufficient" evidence (itself a specially defined term) of carcinogenicity *in animals*. See EPA, *Guidelines for Carcinogen Risk Assessment*, 51 Fed. Reg. 33992, 34000 (1986). Carcinogenicity in animals is determined by tests in which laboratory animals are administered the substance at or near the maximum tolerated dose level over a long period. *Id.* at 33994-95; see also J.A. 268-71, 305-06; S. BREYER,

[6] See EPA, *Guidelines for Carcinogen Risk Assessment*, 51 Fed. Reg. 33992, 33994-96 (1986). The International Agency for Research on Cancer (IARC) has published similar criteria, although the IARC uses somewhat different terminology. See *id.* at 33996; J.A. 236-37.

supra, at 44-46. EPA for its regulatory purposes treats even benign tumors in test animals as evidence of probable human carcinogenicity. 51 Fed. Reg. at 33994, and its list of "probable human carcinogens" is long. When respondent tells this Court that EPA classifies PCBs as a "group B2" "probable" human carcinogen, Resp. Br. 2 n.3, he ought to explain that the agency reserves that status for substances as to which there is *inadequate evidence* or *no data* regarding the effect on human beings. 51 Fed. Reg. at 34000.

2. The purpose of respondent's unexamined invocation of regulatory terminology appears to be to make the unsupported opinions of Drs. Schecter and Teitelbaum appear conventional and obvious. But they are not. Thus respondent urges on this Court the supposed

> "fact that the scientific consensus is in *his* favor, given that federal health authorities believe that it is 'probable' that PCBs cause cancer in humans, including lung cancer."

Resp. Br. 39 (emphasis in original). But the undisputed record before the District Court remains that that is not the "scientific consensus" at all. In fact, for any substance as to which there is sufficient evidence of carcinogenicity in human beings, EPA drops the "probable" label and classifies the agent as a "human carcinogen"—a label EPA does not apply to PCBs. 51 Fed. Reg. at 34000. Thus EPA's regulatory classification actually highlights the absence of scientific evidence that PCBs can cause cancer in humans. See *Conde* v. *Velsicol Chem. Corp.*, 24 F.3d 809, 814 (6th Cir. 1994) (EPA classification of chemical as "probable human carcinogen" based on animal studies is "not probative of medical causation by its own terms").

3. It may also be noted that the position of the United States, of which the EPA is a subordinate agency, is not only that the Court of Appeals' ruling here as to standard of appellate review should be reversed, but that the judgment of the District Court was so plainly a proper application of Rule 702 that no remand for further proceedings

is necessary. See Brief for United States as Amicus Curiae at 26 (District Court made "precisely the inquiry not only authorized, but mandated, by *Daubert*"), 30 ("[i]ts decision therefore should not have been disturbed on appeal").[7]

IV.

Most of respondent's brief is devoted to arguing that the District Court's exclusion was incorrect. Respondent repeats what no one contests: that Rule 702's requirement of "scientific . . . knowledge" is a requirement for scientific methodology. Resp. Br. 21-24. That, indeed, is exactly the point.

1. Respondent argues that for the "gatekeeper" to require, as the District Court did here, that "the conclusion *itself* must be logically supported, without too wide an analytic gap between the conclusion and the underlying data," must mean that "[i]n other words, to be admissible, the district court must believe that the conclusion is correct." Resp. Br. 45 (emphasis in original; quotation marks omitted). But respondent's "[i]n other words" does not follow at all. Prescribed limitations on inferring conclusions from data *is* scientific methodology.

It was the total failure to adhere to such scientific methodology—or any methodology—that the District Court found defective in respondent's two experts' opinions. They referred to epidemiological data and animal tests. But respondent's experts never used any coherent method to explain how the epidemiological data available could support a conclusion of causation with respect to PCBs and human small-cell lung cancer.[8] Respondent's experts

[7] Petitioners did not ask this Court to examine the record to determine itself whether the District Court abused its discretion. See Pet. Cert. 14 n.4. Whether remand for review of the record under the proper standard, or outright reversal, is the more appropriate disposition, this Court has ample discretion to decide.

[8] In epidemiology, for example, a fundamental methodological constraint dictates when an inference of causation is justified. Most often applied are Hill's Criteria, which list eight characteristics data must have "to make a reasonable inference of causation": strength of association; consistency of association; specificity of data; temporality; plausibility; coherence; experiment; and analogy. See NATIONAL RESEARCH COUNCIL, ENVIRONMENTAL EPIDEMIOLOGY 4 (1991); FEDERAL JUDICIAL CENTER, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 160-66 (1994); K. FOSTER, D. BERNSTEIN & P. HUBER, PHANTOM RISK: SCIENTIFIC INFERENCE AND THE LAW 8-9 (1993). Neither Hill's nor any other discernible criteria were followed by respondent's two experts here.

also noted the existence of a few studies concluding that massive doses of PCBs could cause tumors (not lung cancer) in animals, and then leaped to conclude (without even knowing the dosage he had received) that PCBs can cause human cancer and had caused or promoted small-cell lung cancer in respondent. No scientific methodology informed those conclusions. The dissent called it "blue smoke and sleight of hand." P.C.A. 22a.

For district judges to require logical support without an analytic gap between data and conclusions is exactly what this Court in *Daubert* held Rule 702 commands:

> "The study of the phases of the moon, for example, may provide valid scientific 'knowledge' about whether a certain night was dark, and if darkness is a fact in issue, the knowledge will assist the trier of fact. However, (*absent creditable grounds supporting such a link*), evidence that the moon was full on a certain night will not assist the trier of fact in determining whether an individual was unusually likely to have behaved irrationally on that night."

509 U.S. at 591 (emphasis supplied). The District Court's holding was that "the basic methodology employed to reach . . . a conclusion [must be] sound," P.C.A. 67a, quoting *Wells, supra,* and that "the opinions of Plaintiffs' experts do not rise above 'subjective belief or unsupported speculation,'" P.C.A. 67a, quoting *Daubert,* 509 U.S. at 590. "The analytical gap between the evidence presented and the inferences to be drawn . . . is too wide." P.C.A. 67a, quoting *Turpin* v. *Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349, 1360 (6th Cir.), *cert. denied*, 506 U.S. 826 (1992). As this Court explained in *Daubert,*

"in order to qualify as 'scientific knowledge,' an *inference* or assertion *must be derived* by the *scientific method*. Proposed testimony must be supported by appropriate validation—*i.e.*, 'good grounds,' based on what is known."

509 U.S. at 590 (emphasis supplied).

2. Respondent incorrectly tells this Court that "petitioners' experts had not offered any criticism of the methodology used by Teitelbaum and Schecter." Resp. Br. 13; see also Resp. Br. 9-11.[9] But abundantly they had:

(a) With respect to respondent's two experts' reliance on animal studies, petitioners' experts testified:

— "Experimental animals cannot predict; they only give us some clues and the suggestion of ways to go in humans." J.A. 276.

— "[T]he information [from animal studies] cannot be blindly extrapolated to humans." J.A. 265.

— "[Y]ou really can't necessarily correlate animal research to human research until the human research has been done." J.A. 306.

— "[B]efore you can really draw any conclusions about humans, you have to have data on humans, obviously, because they're different." J.A. 306.

— "[U]ltimately, the epidemiological studies are those on which we must rely." J.A. 276.

(b) With respect to respondent's experts' references to epidemiological studies, petitioners' experts testified:

— Epidemiological studies are evaluated "in the context of a set of criteria for making interpretations." J.A. 237.

— "We have the Hill criteria which we have to use for epidemiological studies." J.A. 272.

— "[T]he epidemiology studies have no consistency and no specificity. They vary from one

[9] The Court of Appeals also mistakenly stated that both Dr. Schecter and Dr. Teitelbaum "asserted the general acceptance of the procedures they employed and defendants do not challenge these claims." P.C.A. 11a.

study to another, and they're—none of them are significant." J.A. 272.

— "Based on the epidemiology we have now and the track record we have and what exposures have been, there is no evidence that there would be a situation which there would be adverse health effects." J.A. 274.

(c) With respect to respondent's experts' offering their opinions without any regard to the dose to which respondent had been exposed, petitioners' experts testified:

—"[A]t this point, I think there's no evidence of any health risk as far as small cell cancer is concerned, you know, in this—this particular exposure." J.A. 320.

— "[W]e have not seen effects in people who probably had adipose tissue levels as high as a thousand parts per million." J.A. 378 (Dr. Brown).

— "Anything is toxic if the dose is high enough." J.A. 274.

— "Mr. Joiner has not received a toxicologically-significant dose of PCBs." J.A. 280.

(d) With respect to respondent's experts' broad assertions that the scientific literature contained information to support their opinions, petitioners' experts testified:

— "[T]here was not even any circumstantial evidence in the literature that it [small-cell lung cancer] might be related to PCB . . . ." J.A. 308.

— On whether inhalation of PCBs could affect the respiratory system, "I know of no documentation or literature that there is, you know, a human cause of this in the human literature." J.A. 305.

— On PCB causation of cancer, "I don't think there's any evidence to suggest that . . . in humans." J.A. 382.

— "I think he's [Dr. Schecter] exaggerating the information we have available." J.A. 279.

— "I would not regard his [Dr. Schecter's] interpretations of the analytical data he has as scientifically authoritative." J.A. 379.

In fact, respondent's own experts refuted the methodology on which their opinions depended:

— As to animal studies, Dr. Teitelbaum testified that "I don't think there's an analogy in animals that would be relevant." J.A. 170.

— As to whether any study showed PCBs caused small-cell lung cancer in human beings or any other species, Dr. Teitelbaum testified that "there is no such study." J.A. 169.

— As to dosage, Dr. Schecter testified that the animal studies had reported tumors "in a dose dependent fashion," J.A. 112, but that "I have no opinion" about what dose respondent actually had been exposed to or absorbed. J.A. 118.

— As to epidemiological studies, Dr. Teitelbaum testified that "I don't think that . . . any of them would be willing to say that they have evidence, convincing evidence, that PCBs cause any single kind of cancer." J.A. 161. (Nevertheless, he explained, "the simple fact that it did not reach statistical significance isn't enough to convince me the study is not right." J.A. 164.)

3. Respondent also argues that petitioners' experts

> "used the very same methodology as Teitelbaum—they *looked at the same sources* of information as Teitelbaum, and *engaged in inductive reasoning* to assess the likelihood that these substances had promoted Joiner's cancer—and differed with Teitelbaum only as to the conclusion they reached using this methodology."

Resp. Br. 9-10 (emphasis supplied). He repeats similar assertions of agreement with the methodology of Dr. Schecter. *Id.* at 11-12; see also *id.* at 37 n.54. Not so.

To create the impression that Dr. Schecter and Dr. Teitelbaum based their opinions on conventional scientific methodology, respondent recites that both conducted physical examinations (limited ones), and reviewed respondent's medical history and potential exposure. Resp. Br. 38-39.[10] But they did not explain how any information so obtained sustained any conclusions other than that he had smoked, had a family history of cancer, and now had small-cell lung cancer. The two doctors then, respondent says, "utilized numerous scientific studies and authorities." Resp. Br. 39, quoting P.C.A. 10a. But the two doctors themselves conceded that none of those studies concluded that PCBs could cause any kind of cancer in human beings, much less that PCBs here had caused or promoted small-cell lung cancer in this individual. See J.A. 158, 160, 169-70, 189.

True, petitioners' experts also consulted the available data and studies. But thereafter they most assuredly did not use the "same methodology." Unlike respondent's experts, they did not ignore what the data and studies said.[11] They did not swear to opinions and conclusions that no study could be found to support.

V.

In a number of instances respondent's characterizations are not faithful to the record:

1. Respondent tells this Court that "[o]ne of petitioners' experts acknowledged, with remarkable understatement, that 'there are credible scientists who hold the view that PCBs are an established human carcinogen.'" Resp.

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[10] The doctor who met with respondent only in the attorneys' office was, as respondent correctly notes, Resp. Br. 9 n.18, Dr. Schecter, not Dr. Teitelbaum. See J.A. 103-04, 449. Each met respondent only once, and neither ever ordered tests or discussed the case with the physicians who had actually treated respondent. See J.A. 103-04, 138, 139, 403-04, 449-50.

[11] Dr. Schecter actually rejected the laboratory data of respondent's actual exposure—on the scarcely scientific ground that he did not choose to believe it. See J.A. 123-24, 129-30, 407. The uncontradicted record was that the laboratory tests had been properly performed. J.A. 383-85.

Br. 2 n.3, quoting J.A. 235. But what the cited testimony actually reads is:

> "A. The question is: Do I recognize that there are credible scientists who hold the view that PCBs are an established human carcinogen?
>
> "Q. Yes.
>
> "A. The answer is that *I cannot deny that there are such people, but I don't know who they are.*"

J.A. 235 (emphasis supplied). Elsewhere the same witness testified that there is no cancer in human beings "known to be caused or promoted by PCBs." J.A. 233.

2. Respondent at one point argues that to conduct epidemiological studies of PCBs would be impossible, because experimentation on human beings would not be lawful or ethical. Resp. Br. 40. He is confused. Studies using authorized ingestion of chemical substances by human beings, such as those testing new potentially beneficial drugs, are *experimental* or *clinical* studies, not *epidemiological*.[12] Epidemiological studies do not involve human experimentation; rather, they statistically analyze health effects in a population that has—independently of the study—been exposed to certain agents, to determine whether that population develops certain diseases at a higher rate than an unexposed population. See generally FEDERAL JUDICIAL CENTER, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 129, 131-38 (1994).

Respondent's own experts made reference to several epidemiological studies that have been conducted of factory workers and others exposed to PCBs—and the record

[12] See CASARETT & DOULL'S TOXICOLOGY 951-54 (M. Amdur *et al.* 4th ed. 1991) (clinical studies involve experimentation with volunteers when there is little or no risk of damage or injury). When respondent says that petitioners' expert Dr. Waddell testified "that a controlled *epidemiological* study on humans would 'give them a dose' of PCBs 'to see whether they get lung cancer,' " and would be improper, Resp. Br. 40 n.55 (emphasis supplied), quoting in part S.A. 59, respondent confuses *epidemiological* with *clinical*. Dr. Waddell was not confused. See S.A. 59.

was undisputed that none has found a statistically significant correlation between such exposure and cancer. See J.A. 161, 163-64; P.C.A. 63a. When Dr. Teitelbaum said that it would be "impossible" to obtain epidemiological evidence that would satisfy him, he was complaining about sample sizes, not confusing epidemiological studies with clinical tests.[13] The hurdle facing respondent was not that there are no epidemiological studies looking for a link between PCBs and human cancer, or that such studies are impossible; rather, it was that no such study has found statistically significant evidence that such a link exists.

3. Respondent clouds the nature of Dr. Teitelbaum's career by delicately stating that Dr. Teitelbaum testifies "at only three or four *trials* a year, and in some years he does not appear *in court* at all." Resp. Br. at 8 n.17 (emphasis supplied). What respondent omits is that in an average year Dr. Teitelbaum also appears in depositions and administrative hearings. See J.A. 175-83. Asked how often he testifies during the nine months annually he is in this country, J.A. 167-68, Dr. Teitelbaum replied that "probably 30 to 40 times per year would be a reasonable guess." J.A. 166.

4. Respondent tells this Court that "petitioners now accept the view set forth in Joiner's opposition to certiorari (at 8-13) that *all* circuits apply an abuse-of-discretion standard, although some judges occasionally use older 'manifest error' language to express precisely the same level of deference to district courts." Resp. Br. 26 (emphasis in original), citing Pet. Br. 24-26. However, petitioners did not, by quoting respondent's concession that a deferential standard of review has been virtually universal, agree that all circuits currently so hold, because of course the Third and Eleventh do not.

[13] Certainly petitioners' experts did not, as respondent unaccountably says, "agree[]" with Dr. Teitelbaum's assertion that useful epidemiological studies were "impossible." Resp. Br. 40.

VI.

Finally, respondent now argues that the exclusion of the opinions that PCBs had caused respondent's lung cancer were merely "subsidiary rulings." Resp. Br. 20. The "decisive ruling" of the Court of Appeals, he says, the "key ruling," was its statement at the end of its opinion that there was a genuine issue of material fact as to exposure to furans and dioxins. Resp. Br. 19, 31. From that he says it follows that even if the Court of Appeals' reversal of the Rule 702 exclusion was improper, its judgment should nevertheless be affirmed. Resp. Br. 32-33. But the District Court's exclusion under Rule 702 of the opinions asserting PCB causation was not "subsidiary," nor was the Court of Appeals' reversal of it.[14]

Respondent claimed, and his two experts offered opinions, that he had been exposed to PCBs and that PCBs had caused or promoted his disease. J.A. 21, 112, 403, 470. They also asserted exposure to and causation by furans and dioxins. J.A. 107, 140, 143.[15] The District Court granted summary judgment on the PCB claim because it held that the opinions on PCB causation failed both the "reliability" and the "fit" requirements of Rule 702. It held that reliability was not satisfied, as noted above, because of absence of scientific methodology. P.C.A. 58a-68a. The "fit" requirement was not met either, the District Court held, because although "Plaintiffs' experts assumed Joiner was exposed to furans and dioxins" and "this assumption is an integral part of the foundation for the

[14] Respondent professes puzzlement that the Court of Appeals devoted nearly all its opinion to the admissibility of the PCB causation opinions under Rule 702. He says that "[t]he Eleventh Circuit did not explain why it addressed this issue." Resp. Br. 17 n.36. The Court of Appeals, obviously, did not share respondent's current understanding of what was the "key ruling." Its reference to possible exposure to furans and dioxins was confined to the final two paragraphs of its opinion. P.C.A. 14a-16a.

[15] Dr. Teitelbaum even was willing to opine generally that respondent's lung cancer had been caused by "the materials with which he worked," J.A. 140, 146, 470, by which term Dr. Teitelbaum said he included ordinary mineral oil and paint. J.A. 149-50, 153.

experts' opinions that PCBs contributed to Joiner's lung cancer," nevertheless "Plaintiffs have failed to show a genuine dispute over whether furans and dioxins were in the PCBs to which Joiner was exposed." P.C.A. 57a. Thus on respondent's PCB claim, the District Court held the opinions inadmissible under Rule 702 for lack of both "fit" and reliability. P.C.A. 68a. Because it held respondent had failed to present evidence creating a genuine issue of material fact that respondent had been exposed to furans and dioxins, P.C.A. 51a, the District Court did not consider whether the opinions would satisfy Rule 702 insofar as they asserted that furans or dioxins could cause or promote small-cell lung cancer.

Because the District Court's exclusion as to the claim of causation by PCBs rested alternatively on both the "fit" and reliability requirements of Rule 702, the Court of Appeals had to reject both bases for exclusion in order to reverse. That is what it did. Regarding "fit," the Court of Appeals held that whether furans and dioxins were present or not was "immaterial" to the admissibility of the opinions on PCB causation:

> "Although the terms 'PCBs,' 'dioxins,' and 'furans' often appeared together in each expert's proffered testimony, and at times the Joiners' experts asserted that it can be assumed furans and/or dioxins were present in the City's PCB-contaminated transformer fluid, it does not necessarily follow that each expert's opinion that PCB caused Joiner's cancer was contingent upon his exposure to furans or dioxins. . . . Thus, in terms of the Joiners' claim that PCB alone can cause cancer, *it becomes immaterial whether there were furans and dioxins in the fluid*."

P.C.A. 14a (emphasis supplied). Therefore, the Court of Appeals held, the District Court had no basis for ruling that the opinions on PCB causation lacked "fit." Regarding the District Court's other basis for Rule 702 exclusion—lack of reliability as science—the Court of Appeals also reversed, because, as discussed above, on "particu-

larly stringent review" it disagreed with the District Court's conclusion that the opinions lacked scientific reliability. P.C.A. 12a-13a.

The Court of Appeals added that in its view there was a genuine factual dispute "over whether furans and dioxins could have been present in the dielectric fluid." P.C.A. 15a. It never reached the question whether opinions of causation by furans or dioxins would be admissible, because the District Court had not done so.

Respondent now argues that based on the Court of Appeals' furan and dioxin exposure ruling, its entire judgment should be affirmed. Resp. Br. 31-33. That does not make sense. If, as petitioners contend, the Court of Appeals used an incorrect nondeferential standard of review in rejecting the exclusion that was the basis for the PCB judgment, then reversal of the Court of Appeals' judgment as to the PCB portion of the case is called for. This Court frequently reverses holdings that dispose of some claims in a case but not others. See, *e.g.*, *National R.R. Passenger Corp.* v. *Boston & Maine Corp.*, 503 U.S. 407, 424 (1992). Moreover, respondent until now never contended that the furan and dioxin ruling somehow controlled the whole case; his opposition to certiorari argued, to the contrary, that "the judgment below is based on the holding, under *de novo* review, that the district court applied an erroneous construction of Fed. R. Evid. 702." Br. Opp. 6 (capitals omitted). "Under this Court's Rule 15.2, a nonjurisdictional argument not raised in a respondent's brief in opposition to a petition for a writ of certiorari 'may be deemed waived.'" *Caterpillar Inc.* v. *Lewis*, 117 S. Ct. 467, 476 n.13 (1996).

CONCLUSION

For the reasons stated herein and previously, the judgment of the Court of Appeals should be reversed.

Respectfully submitted,

DAVID H. FLINT
ALEXANDER J. SIMMONS, JR.
SCHREEDER, WHEELER & FLINT
1600 Candler Building
Atlanta, Georgia 30303
(404) 681-3450

HENRY W. EWALT
Associate General Counsel
Westinghouse Electric Corporation
11 Stanwix Street
Pittsburgh, Pa. 15222
(412) 642-4025

Attorneys for Petitioner Westinghouse Electric Corporation

EDWARD M. NEWSOM
HAWKINS & PARNELL
303 Peachtree Street, N.E.
Atlanta, Georgia 30308
(404) 614-7400

GERARD H. DAVIDSON, JR.
SMITH HELMS MULLISS & MOORE, L.L.P.
300 North Greene Street
Greensboro, N.C. 27401
(910) 378-5200

THOMAS M. BISTLINE
Assistant General Counsel
Monsanto Company
800 North Lindbergh Blvd.
St. Louis, Missouri 63167
(314) 694-2989

Attorneys for Petitioner Monsanto Company

JOHN G. KESTER *
STEVEN R. KUNEY
ROBERT J. SHAUGHNESSY
JOANNA L. GROSSMAN
WILLIAMS & CONNOLLY
725 12th Street, N.W.
Washington, D.C. 20005
(202) 434-5069

ANTHONY L. COCHRAN
CHILIVIS, COCHRAN, LARKINS & BEVER
3127 Maple Drive, N.E.
Atlanta, Georgia 30305
(404) 233-4171

BENJAMIN W. HEINEMAN, JR.
Senior Vice President, General Counsel and Secretary
THOMAS H. HILL
Senior Counsel
EFFA G. FARNSWORTH
General Electric Company
3135 Easton Turnpike
Fairfield, Connecticut 06431

Attorneys for Petitioner General Electric Company

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* Counsel of Record